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### MUNICIPAL WASTEWATER LAND APPLICATION PERMIT LA-000018-03

### **Outlet Bay Water and Sewer District**

Outlet Bay Water and Sewer District, 91 Williams Drive, Priest Lake, ID 83856, IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL AND OPERATE A WASTEWATER-LAND APPLICATION TREATMENT SYSTEM IN ACCORDANCE WITH THE WASTEWATER-LAND APPLICATION RULES (IDAPA 58.01.17), THE WATER QUALITY STANDARDS AND WASTEWATER TREATMENT REQUIREMENTS (IDAPA 58.01.02), AND THE GROUND WATER QUALITY RULE (IDAPA 58.01.11) AND ACCOMPANYING PERMIT APPENDICES AND REFERENCE DOCUMENTS. THIS PERMIT IS EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON September 1, 2007.

Gwen P. Fransen, Regional Administrator Idaho Department of Environmental Quality

Signed this 27<sup>th</sup> day of August 2002

DEPARTMENT OF ENVIRONMENTAL QUALITY 2110 Ironwood Parkway, Coeur d'Alene, Idaho 83814 (208) 769-1422 (208) 769-1404 fax POSTING ON SITE RECOMMENDED

### **B.** Permit Contents and Reference Documents

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The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater-Land Application Permit and are enforceable as such. This permit does not relieve the permittee from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

# **C.** Facility Information

Legal Name of Permittee	Outlet Bay Water and Sewer District
Type of Waste	Municipal wastewater
Method of Treatment	Slow Rate
Type of Facility	Municipal
Site Acres	120 acres total (46 acres used for land application)
Facility Location	Priest Lake, Idaho
Legal Location	59N, 4W, Section 6 and 60N, 4W, Section 31
County	Bonner
USGS Quad	Outlet Bay, Priest Lake SW
Soils on Site	Bonner Silt Loam
Depth to Ground Water	10-50 feet (estimated) to seasonal high ground water in the Spring
Beneficial Uses of Ground Water	Drinking water
Nearest affected Surface Water	Lamb Creek (600'), Priest Lake (1,100')
Beneficial Uses of Surface Water	Drinking water, recreation, aquatic life.
Facility Contact Person Mailing Address Phone/Fax Number	Eric Anderson, Chairman or Fritz Broschet, Operator Outlet Bay Water and Sewer District 91 Williams Dr. Priest Lake, ID 83856 (208)443-3831 (208)443-8005 Fax

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# **D. Site Maps**

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# **E.** Environmental Monitoring Serial Numbers

Computerized Data Reporting Serial Number Key

HYDRAULIC MANAGEMENT UNITS							
Description Acres Serial No.							
Field 1	46	HMU-001801					

WASTEWATER SAMPLING POINT					
Description	Serial No.				
Sampling tap located on irrigation main line after full chlorine contact time and prior to	WWV 001001				
first sprinkler head	WW-001801				

SOIL MONITORING UNITS						
Description	Associated Hydraulic Unit	Serial No.				
FIELD 1 (46 acre land application site)	HMU-0001801	SMU-0001801				

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### F. Reference Documents incorporated or to be incorporated into the Permit

- 1. <u>Plan of Operation</u> This document will provide the detailed description of how the facility will be operated to comply with the conditions of this permit. It may be incorporated into the Operation and Maintenance Manual.
- 2. <u>Silviculture Plan</u> This plan will provide a management approach to be used by the District for maximizing the hydraulic and nutrient uptake of the conifer forest and understory vegetation on the wastewater land application site. The plan must be prepared by a qualified silviculturalist and shall include the following: 1) Outline initial tree cultivation and harvesting methods; 2) Discuss management techniques used in between harvest periods; 3) Discuss how weed control will be done; and 4) Suggest reforestation strategies and recommend harvest cycle frequencies.

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## **G.** Compliance Schedule For Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by the DEQ in writing.

Compliance Activity Number Completion Date	Compliance Activity Description
CA-00018-01 <b>January 15, 2003</b>	The permittee shall submit to the Department for review and approval a preliminary Plan of Operation
CA-00018-02 <b>January 15, 2003</b>	The permittee shall submit to the Department a revised Facility Site Plan Map that incorporates the final locations of all structures and facilities.
CA-00018-03 <b>April 1, 2003</b>	The permittee shall submit to the Department for review and approval a Silviculture Plan.
CA-00018-04 <b>April 1, 2003</b>	The permittee shall submit to the Department for review and approval a final Plan of Operation.
CA-00018-05 <b>March 15, 2007</b>	Meet with the Department for a pre-application conference to renew the Wastewater Land Application Permit. Submit an application package to the Department.
CA-00018-06 <b>May 15, 2007</b>	Complete a lagoon leakage test in accordance with the Department's procedures on both lagoons and submit the results to the Department for review.

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### **H. Permit Conditions**

1) The Permittee is allowed to apply wastewater and treat it on a land application site as prescribed in the tables below and in accordance with all other applicable permit conditions and schedules.

Category	Permitted Limits and Conditions							
Type of Wastewater		Municipal Wastewater						
Application Site Area		46 acı	es					
Application Season								
Maximum Hydraulic Loading Rate, Growing Season (includes wastewater and supplemental irrigation water, if used)		Growing Season only, May 1 – September 30  Growing Season (GS) Hydraulic Loading Rate shall be no greater than the following monthly application rates:  May – 1.37 inches/acre June – 4.75 inches/acre July – 8.05 inches/acre August – 6.37 inches/acre September – 3.42 inches/acre						
Down gradient ground v	vater	Rule I	DAPA 58.01		•	e with <i>Idaho</i>	Ground Wate	er Quality
COD application rate		50 po	unds/acre/day	(Seasonal av	erage)			
Maximum Nitrogen Application Rate – from all sources		125% of 220 lbs./acre/year or 275 lbs./acre/year (see "Staff Analysis" for discussion.						
Maximum Phosphorus Application Rate – from all sources		125% of 20 lbs./acre/year or 25 lbs./acre/year						
Grazing		Grazing is <b>not</b> allowed.						
Allowable crops		Timber (conifer species) will be the crop. Crops grown for human consumption are not allowed.						
Signing		placed and For site bo	l every 500 feorest Service bundaries and ving or equiva	ed every 100 feet along the F Trail #235 whare 300 feet alent: "Reclai	Forest Servic nere these roa away. The w	e Road #1048 ads/trails para vording on the	B, West Lake allel the land a signs will b	Shore Road application
Buffer Zone Distances (based on sprinkler irrigation)  Disinfer Lev (tot colifer		el* tal	Distance to Public Access	Distances to Inhabited Dwellings	Distance to streams	Distance to private water sources	Distance to public water sources	Single sample maximum total coliform level
23/100		0 ml	300 feet	300 feet	50 feet	500	1000	240/100ml

<sup>\*</sup>Compliance determination method for disinfection requirements is as follows:

• For determining compliance with the 23 / 100 ml disinfection level, the median value of the last five (5) results must not exceed 23 / 100 ml. In addition, no single sample value shall exceed 240 / 100 ml.

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#### I. Standard Monitoring Requirements

- 1) Appropriate analytical methods, as given in the *Handbook for Land Application of Municipal and Industrial Wastewater, April 1996*, or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the Operation and Maintenance Manual.
- 2) The permittee shall monitor and measure parameters as stated in the Facility Monitoring Schedule in this section. Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
- 3) Monitoring locations are described in Section E. Environmental Monitoring Serial Numbers.
- 4) Monitoring is required at the frequency shown in the table below if wastewater is applied anytime during the time period shown.
- 5) If the soil management unit is less than 15 acres, use 5 sub-samples. If the soil management unit is greater than 15 acres, use 10 sub-samples.
- 6) Five (5) soil sample locations shall be selected for each management unit. Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches. The soil samples collected at 0-12 inches from each sample location shall be composited. Similarly, all soil samples collected at 12-24 inches shall be composited and all soil samples collected at 24-36 inches shall be composited. Equal volumes will be taken from each depth composited sample. From each of the three volumes collected, the appropriate volumes will be obtained for testing. For each soil management unit, three samples will be submitted to the lab and tested for the parameters listed.
- 7) Ground water monitoring wells shall be purged a minimum of three (3) casing volumes prior to obtaining a sample of ground water.

#### **Facility Monitoring Schedule**

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Daily (when irrigating)	Flow meter on irrigation discharge line in Control Building	Volume of Wastewater land applied	Gallons/Day, Gallons/Month and inches/acre applied to each Hydraulic Management Unit
Daily (when irrigating)	Sampling tap located on irrigation line after chlorine contact chamber and before first sprinkler head	Grab Sample	Free Chlorine Residual (mglL)
Weekly (when not irrigating) Daily (when irrigating)	Influent flow meter	Volume of influent wastewater to treatment plant	Gallons/day
Monthly (when irrigating)	Sampling tap located on irrigation line after chlorine contact chamber and before first sprinkler head	Grab Sample	total kjeldahl nitrogen as N (TKN), total nitrate + nitrite as N (mg/l)
Twice per year (June and September)	Sampling tap located on irrigation line after chlorine contact chamber and before first	Grab Sample	total phosphorous as P, chemical oxygen demand (COD), total dissolved solids (TDS) (all in mg/l)

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Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
	sprinkler head		
Weekly (when land applying)	Sampling tap located on irrigation line after chlorine contact chamber and before first sprinkler head	grab sample	Total Coliform (CFUs/100 ml.)
Annually	Hydraulic Management Unit (HMU)	Acres used for land application	Acres
Annually	Hydraulic Management Unit	COD loading calculation	COD applied in lbs/acre/day
Annually	Hydraulic Management Unit	Total nitrogen and phosphorus load from fertilizer or all other non-wastewater application.	Nitrogen and phosphorus applied in lbs/acre/year
Annually	Hydraulic Management Unit	Total nitrogen and phosphorus loading calculation from wastewater	Nitrogen and phosphorus applied in lbs/acre/year
When timber is harvested	Hydraulic Management Unit	Calculation of nitrogen and phosphorous removed from site	lbs./acre for nutrients and board feet of timber removed
Twice per year (April and October)	Soil Monitoring Unit (SMU)	Composite soil sample (10 subsamples taken from across 46-acre site. At each sampling site, samples taken from the following depths: 0-12"; 12"-24"; and 24"-36". Each discrete depth is composited into a single sample resulting in three separate samples to be analyzed for all the parameters.	Electrical Conductivity (EC), nitrate-N, ammonia-N, plant available phosphorous, percent organic matter and pH. (all except EC and pH reported in mg/kg, dry weight)

### J. Standard Reporting Requirements

- 1. The permittee shall submit an Annual Wastewater-Land Application Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than January 31 of each year which shall cover the previous year from January 1 through December 31. The Annual Report shall include results for monitoring required in Section E, status of compliance activities, and an interpretive discussion of monitoring data (ground water, vadose zone, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.
- 2. The permittee shall submit a Monthly Report during the land application season (May to September) to the Department by the 10<sup>th</sup> of the month (in June, July, August, September and October). The report will provide the data on daily volumes applied on the field, daily chlorine residual results and the total coliform results. This will not change any of the other reporting requirements in this permit.

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#### K. Standard Permit Conditions: Procedures and Reporting

- 1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater-Land Application Permit Regulations, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.
- 2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site unless permission has been obtained from the DEQ authorizing a discharge into the waters of the State as stated in IDAPA 58.01.02.600.02.
- 3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.02.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
- a. Apply wastewater as evenly as practicable to the treatment area:
- Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
- c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
- 4. As a result of the land application of wastewater, ground water of the state must not contain contaminants exceeding those values as referenced under IDAPA 58.01.11.200a, b and c of the <u>Ground Water Quality</u> Rule, unless otherwise specified in this permit.
- 5. The permittee shall:
- a. Manage the wastewater land application treatment site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and
- b. Not hydraulically overload any particular areas of the wastewater land application treatment site.
- 6. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.
- 7. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Waste Water Land Application Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.

- 8. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:
- a. Enter the permitted facility,
- b. Inspect any records that must be kept under the conditions of the permit.
- c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
- d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
- 9. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
- a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
- b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
- c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

DEQ Regional Office: see Permit Certification Page Emergency 24 Hour Number 1-800-632-8000

- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any noncompliance unless extended by the DEQ. This report shall contain:
- A description of the non-compliance and its cause;
- ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
- iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.
- e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
- 10. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
- 11. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

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#### L. Standard Permit Conditions: Modifications, Violations, and Revocations

- 1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
- 2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.
- 3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in G. Reporting Requirements, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.
- 4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
- 5. Any person violating any provision of the Waste Water Land Application Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.

- 6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Land Application Permit Regulations.
- 7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within twenty (20) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Director.
- 8. The Director shall notify the permittee in writing of any revocation hearing at least twenty (20) days prior to the date set for such hearing. The hearing shall be conducted in accordance with Title 67, Chapter 52, Idaho Code.
- 9. If, pursuant to Idaho Code 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing the Director shall provide the permittee a revocation hearing and prior notice thereof. Such hearings shall be conducted in accordance with Title 67, Chapter 52, Idaho Code.
- 10. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.
- 11. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted land application site from service. Prior to commencing site closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the presite closure meeting. The permittee must complete the DEQ approved site closure plan.